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A

# NEW METHOD OF REDUCTION

IN

# LOCATIONS OF THE HUMERUS.

BY

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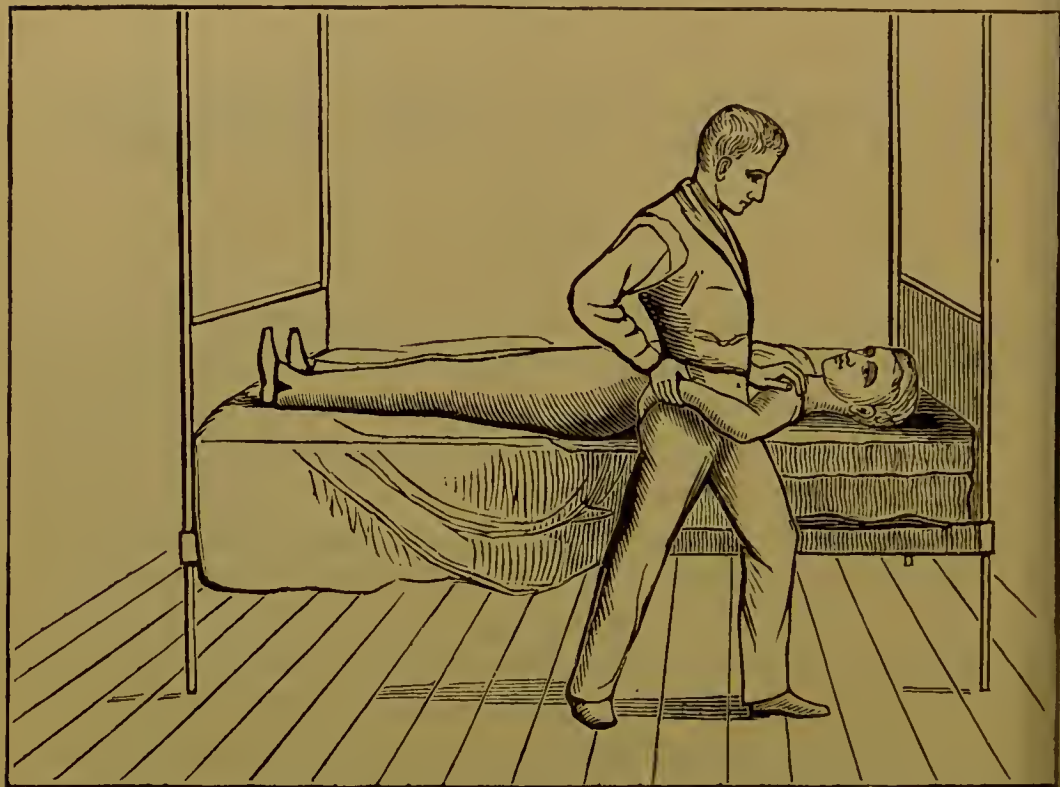
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SOME years ago I read a few notes before the Surgical Society of Ireland upon certain expedients which I found useful in the reduction of various dislocations. Since that time, my connexion with an accident hospital such as Jervis-street, my surgical practice, and the kindness of my friends, have afforded me so many opportunities of testing the utility of those measures, that I am anxious to bring them again under the notice of the profession.

On this occasion I shall confine my remarks to luxations of the humerus, and I shall briefly narrate the circumstances under which I was fortunate enough to discover my method of reduction. Late one night, a sailor, aged forty years, was admitted into Jervis-street Hospital with intracoracoid dislocation. He was a man of remarkable muscular development, and of a highly nervous temperament. After trying unsuccessfully some of the ordinary modes of reduction, I thought of controlling his vigorous and powerful resistance by the administration of chloroform, but upon examining his heart, I discovered such extensive valvular disease that I hesitated to produce anæsthesia without formal consultation, which was impracticable at such an hour. As the patient suffered great pain, and was clamorous for speedy relief, I repeated my efforts, and exhausted every means of reduction with which I was conversant, until in a mental condition, intermediate between desperation and a vague sense of the utility of the measure, I turned my back towards the patient, who was on a mattress, and, lying across him, I drew his arm round my pelvis, and giving my body a sudden turn, or version, I was delighted by the agreeable sound and sensation which indicate the reduction of a dislocation.

The striking success of this expedient, after the failure of so many time-honoured and valuable modes of reduction, produced in my mind a train of thought which resulted in the elaboration of the method which I recommend, with a confidence based upon the extensive experience of over twenty successful cases, with but one failure.<sup>a</sup>

Fig. 1.



For my operation, the selection of a couch or bed is of importance. It should be firmly fixed, and hard, and, when a choice is practicable, I prefer it, for the subglenoid dislocation, to be about three inches lower than the great trochanter of the operator, whilst one lower still by a few inches, for the anterior dislocations, and a little higher for the posterior, allows the force to be applied advantageously in the direction of the glenoid cavity. The patient should be placed as close as possible to the edge of the couch, on his back, with his head low. In order to make the description of the procedure intelligible, I shall divide the operation into two

<sup>a</sup> This occurred in a Norwegian sailor, in whom a subclavicular dislocation of eight weeks standing subsequently resisted a mechanical force, which, although most carefully applied, produced serious inflammation, and such an extravasation that evidently some important axillary vessels were ruptured. An interesting paper on this accident, by Dr. Körte, of Berlin, who refers to thirty-eight cases, is reviewed in the London Medical Record of July, 1882.



stages. The first, or preparatory stage, in which the surgeon assumes the most favourable position for the reduction, is well depicted in Fig. 1. The operator places the injured arm at right angles to the body, and standing against it, with his side to the patient and his hip pressed firmly, but not roughly, into the axilla, he folds the arm and hand of the patient closely round his pelvis, and fixes the hand firmly by pressing it against the crest of his ilium. The second stage, during which the reduction is effected, is very simple, consisting merely of a rotation, or version, of the surgeon's body into the position represented in Fig. 2, with a force and rapidity which necessarily vary with the peculiarity of the dislocation—some yielding most readily to a sudden and powerful effort, and others to gentle and gradually increasing traction.<sup>a</sup>

Fig. 2.



In reviewing this manœuvre I shall briefly contrast the substitutes which it affords with the recognised methods of making extension, counter-extension and coaptation. In the application of extension, instead of the grasp of the operator, which is often insufficient, the clove-hitch or other knot, the special bracelets,

<sup>a</sup> In both the woodcuts the operator's right hand should be represented as being more posterior, and grasping the hand of the patient rather than the wrist.

combined with flexion of the fore-arm, bandages, chamois or adhesive plaister, I propose the simple folding of the arm, fore-arm and hand round the pelvis, which, forming a series of angles, distribute the resistance, so as to enable the operator, with one hand, to afford sufficient fixity for the application of the powerful extending force. For the limited strength of the operator, the uncertain and mutually obstructive force derived from numerous assistants, or the dangerous and sometimes disastrous mechanical extension by pulleys or adjusters, I would substitute a perfectly controllable and easily sustained power of some hundreds of pounds, derived from nearly all the muscles of the trunk and of the upper and the lower extremities. Again, for counter-extension, which must have been a matter of great difficulty, when such means were necessary, as the split-sheet, the fixation-table, the albi, or the special belts, the numerous assistants, the suspension of the patient over a door, through a ladder, or from the ceiling, I suggest the weight of the patient's body and the resistance afforded by its traction or friction over the rough surface of the couch. For coaptation, in lieu of the various fulcra, such as the heel, the knee, the bed-post, as well as the special balls, the jack-towels, &c., I supply one which is safe and efficient—safe, inasmuch as the well-padded gluteal region is unlikely to produce such injuries as laceration of the axillary vessels or fracture of the ribs;<sup>a</sup> and efficient because, in the torsion of the body, the hip materially assists by forcing the head of the humerus towards the glenoid cavity, and by its volume it makes the extension tend to the desirable angle of  $45^{\circ}$ , which places the deltoid and supra-spinous muscles in the most favourable condition. For any additional “manipulation,” the surgeon has the hand next the patient's axilla disengaged for such manœuvres as lifting the head of the humerus into its cavity, making traction upon it forwards or pressure backwards, according to the nature of the dislocation. The fixation of the scapula, a point of considerable importance, is secured by its position between the couch and the body of the patient, while its inferior angle is supported by the gluteal region of the operator.

One of the great advantages of this operation is the ease with which a surgeon can reduce almost any dislocation without assistance or the appearance of violent exertion; but should a case of peculiar difficulty present itself, additional extension may be applied by one or more assistants making mediate or immediate

<sup>a</sup> In at least one case of dislocation I have seen this accident occur.

traction on the patient's arm; and the counter-extension is as readily increased by pressure on his uninjured shoulder or his pelvis.

The importance of being able to dispense with anæsthesia in operations is indisputable, especially when the surgeon is summoned to perform them suddenly, and without assistance, as so frequently occurs in dislocations. I claim this advantage to a very great extent for my method, as in only one case in my experience have I had to resort to that or any other auxiliary.

My colleagues, Messrs. William Stoker and Cranny, have informed me of seven dislocations occurring in their practice, and reduced by my method.



